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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,213	08/22/2003	Todor Sheljaskow	2003P09221US	9032

7590 07/21/2006

Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

BUDD, MARK OSBORNE

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 07/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/646,213	Applicant(s) SHELJASKOW, TODOR	
	Examiner Mark Budd	Art Unit 2834	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-8, 10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-8, 10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Claims 5-8, 10 and 11 are rejected under 35 USC 103 as unpatentable over Smith (095) in view of Smith (406). Smith (095) in figure 3 teaches the basic multidimensional array transducer, but uses only a single thickness of a conductive acoustic impedance matching material (#40). However, Smith (406) teaches that an acoustic impedance match becomes more efficient when providing multiple layers of matching materials. Smith also teaches how to design the layers to achieve a predictable outcome (this includes relationships between material density and layer thickness). Thus, it would have been obvious to one of ordinary skill of the art to provide multiple electrically conductive acoustic impedance matching layers in Smith (095) for the advantages taught by Smith (406). Since Smith (095) specifically desires the impedance matching layer #40 to be conductive to allow for the outside piezoelectric electrode to be electrically connected to ground, any subdivision of layer #40 (or provision of multiple layers for the acoustic impedance matching layer) would of necessity be electrically conductive for it to provide an operable device.

Regarding applicant's comments, it is noted that Smith (095) clearly states that "FIG>3as seen in FIG.3, a conductive foil 70such as gold coated mylar or silver foil is connected to ---the matching layer 40 if present.". Thus, as noted above, if multiple back layers were to be provided to Smith (095)) they would all need to be conductive in order to successfully electrically connected the piezoelectric electrodes to the ground plane. It is not seen how the final design thickness of the matching layer is relevant to the obviousness of providing multiple impedance matching layers in place at a single layer. The teaching of Smith (406) on how to design a multilayered impedance matching unit is not considered to be limited to only two layers. The design principles would apply no matter how many layers were used. The choice of how many layers to provide would be a trade-off between increased costs in vs. increased inefficiency. The examiner concedes that neither reference explicitly uses signal traces to electrically connected at least one of the matching layers. However,, since signal traces are well known per se for making electrical connections, and it is obvious that #70 of Smith (095) must be provided with an electrical connection it would have been obvious to one of ordinary skill of the art to provide any well-known electrical connection means to connect Smith's ground plane #72 an electrical circuit.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

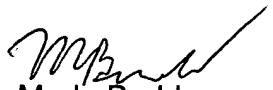
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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Budd whose telephone number is 571-272-2019. The examiner can normally be reached on Monday-Friday from 6 a.m. to 4 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ggarrett Schuberg, can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Mark Budd
Primary Examiner
Art Unit 2834